



## National Interagency Fire Center

3838 S. Development Avenue

Boise, Idaho 83705

May 21, 2004

To: Geographic Area Coordination Groups

From: National Multi Agency Coordination Group

Subject: Effective and Efficient Use of Single Engine Air Tankers

With the cancellation of the large air tanker fleet for the 2004 fire season, and the limited number of Modular Airborne Fire Fighting Systems (MAFFS) that will be available, we are anticipating that the use of Single Engine Air Tankers (SEATs) will increase this season. In conjunction with this increase, there will be SEATs in locations that have not had any operational experience with this type of resource. With this in mind, there are some "Lessons Learned" that should be discussed in order to prevent ineffective or inefficient use.

The first reminder is that SEATs do not replace large air tankers on a gallon by gallon basis. It is simple physics that 600 or 800 gallon aircraft will not be able to perform the same mission as an aircraft that carried 2,000 to 3,000 gallons. The SEAT program was developed as a "Close Air Support" resource and as an initial attack tool to supplement the other firefighting resources available to the fire manager. SEATs are not effective or efficient when used to build long retardant lines, and because of the size of the payload, are less effective in triple canopy type fuels.

With this said, there are many logistical and tactical advantages to using Seats. These aircraft and the support equipment they come with are very mobile and the logistic support required to sustain operations can be minimal. This means that moving the SEAT operation closer to the incident is easy and provides better capability to support the requirements of the incident commander. This will also allow the resource to respond quickly to initial attack as well as extended attack missions.

In the wildland/urban interface areas, SEATs are an excellent tool for providing "Close Air Support" in conjunction with structure protection operations. Their maneuverability and relative slower drop speed enable these aircraft to perform this mission with little risk to property and ground firefighters. In fact, the urban interface type of mission is precisely what this resource was developed to perform.

The SEATs have also proven to be very effective in the “Close Air Support” role in conjunction with ground firefighters. These aircraft work well when supporting burnout operations and in providing coverage for crews and other resources in direct contact with the fire suppression efforts (engines, dozers, hand crews, Helitack crews, smoke jumpers etc.,). One of the most effective and efficient utilizations of the SEATs has been when they are paired up with a helicopter and Helitack crew and dispatched early on initial attack fires. Even though SEATs carry a relatively small amount of retardant/suppressant, if used quickly and in conjunction with other resources, they will provide the fire manager with an effective and efficient fire suppression force. One thing to always remember when utilizing SEATs is that the closer they are to the incident the quicker the turn around and the more material is placed on the incident.

Although capable of initial attack on their own, SEATs are probably best utilized in conjunction with aerial supervision. This will most always lessen the time over target and enable the SEAT to return to base for more retardant/suppressant. ATGS/ASM should have no trouble integrating SEATs into the fire environment. The thing to remember is that SEATs are harder to see, because of their size, and most likely will enter the fire airspace at lower altitudes than what is common with the large air tankers. When in the fire environment, SEATs are not effective in building long sections of line, but are very effective in closing gaps, supporting helicopter bucket operations, or in close support of the ground firefighters. I would encourage all aerial supervisors that do not have experience with SEAT operations to contact someone who has, or get in touch with the Bureau of Land Management Aerial Supervision Program Manager.

In summary, what we have found to be effective and efficient use of SEATs is to:

1. Get them flying early. They are most effective during initial attack operations.
2. Keep them flying. By moving the SEAT to a location in close proximity to the incident the efficiency of the resource multiplies.
3. Use aerial supervision if at all possible. This will reduce “time over target” and facilitate additional missions.
4. Integrate SEATs with other available resources. Helitack, engines, jumpers...
5. Consider additional SEATs when the need arises. This will multiply the amount of retardant/suppressant delivered to the incident.
6. Use as a “Close air support” resource. Integrate with ground resources, and supplement structure protection within the urban interface.
7. Do not use to construct long sections of fire line.
8. Do not fall into the trap of using SEATs only with retardant. SEATs are an effective resource when used with either foam or water, but remember to

notify the ground firefighters of the type of suppressant being used in order to facilitate a change of tactics if needed.

9. Read and follow guidance found in the Interagency SEAT Operations Guide. This is a policy document for the Department of the Interior and the Forest Service.

If there are any questions or concerns about the operation of SEATs, please contact Mark Bickham at 208-387-5872.

/s/ Don Artley  
Chair, NMAC